To: R2 EPA Region 2 (EPA Staff)[R2_EPA_Region_2_EPA_Staff@epa.gov]
From: Shore, Berry
Sent: Wed 8/10/2016 12:36:42 PM
Subject: PFOA/PFOS Clips

Federal Data Shows Firefighting Chemicals In U.S. Drinking Water Sources

By Christopher Joyce • 14 hours ago

NHPR –New Hampshire Public Radio

Photo: Protesters in Hoosick Falls, N.Y., in June hold signs calling for hearings on contamination in their town's drinking water by a chemical related to firefighting foam.

A study of drinking water supplies throughout the U.S. shows that numerous sources are contaminated with firefighting chemicals.

A team of scientists examined government data from thousands of public drinking water supplies. The water samples had been collected by the federal Environmental Protection Agency.

The scientists were looking for several types of chemicals from a class of fluorinated substances used commonly in firefighting foam.

They found significant amounts of one chemical in 66 water supplies. Two other versions of the chemicals showed up in nearly 200 supplies. In some cases the level was barely above the maximum allowable limit set by the government. Others were far higher. The researchers say some 6 million people in 14 states are served by these water sources.

The chemicals showed up more often near sites where these firefighting chemicals are common, such as airports or military bases. "During firefighting practice drills," says Arlene Blum, a study co-author from the University of California Berkeley, "large volumes of these chemicals wash into surface and ground waters and can end up in our

drinking water." They are also found often near sites where the chemicals are manufactured.

These chemicals, called poly- and perfluoroalkyl substances, have been in use for decades and are very persistent once they're out in the environment.

The study, published in Environmental Science and Technology Letters, did not determine people's actual exposure to the chemicals. And the amounts found in most cases were very low. But the chemicals have been linked to cancer, low birth weight in children born to women who are exposed, and hormonal changes.

Leaks causes water problems in Petersburgh:Well being used has tested above federal PFOA advisory level

Updated 9:13 pm, Monday, August 8, 2016

Times Union

Photo: Petersburgh resident Teresa Scicchitano-deWaal tells how the PFOA contamination has personally impacted her life during a roundtable discussion held by U.S. Senator Kirsten Gillibrand at Hoosick Falls Central School on Friday July 8, 2016 in Hoosick falls, N.Y. (Michael P. Farrell/Times Union) Photo: Michael P. Farrell / 20037243A

Photo: Petersburgh resident Teresa Scicchitano-deWaal tells how the PFOA contamination has personally impacted her life during a roundtable discussion held by U.S. Senator Kirsten Gillibrand at Hoosick Falls Central ... more

Petersburgh

Because of a leak, the town has switched its water system to a well that has tested for PFOA levels above the federal advisory level, Rensselaer County said Monday.

Residents should continue to use bottle water for drinking cooking and preparing baby formula, the county and state Departments of Health said.

Well No. 2 has PFOA or perfluorooctanoic acid levels above 70 parts per trillion, the departments said.

The county and state said they are working with the town to address the situation and the installation of a permanent water treatment system for the municipal supply.

Bottled water may be picked up at Town Hall during distribution times as posted on the town's website.

— Kenneth C. Crowe II

High PFOA Levels in Hoosick Falls Blood Tests Show Need to Test Newburgh Residents: Both communities had tainted drinking water, Riverkeeper points out.

By Lanning Taliaferro (Patch Staff)

August 8, 2016 10:00 am ET

Mid-Hudson Patch.com

Riverkeeper, New York's clean water advocate, has issued a statement regarding the extremely high levels of Perfluorooctanoic acid (PFOA) found in the blood of Hoosick Falls, NY residents who drank from the tainted municipal water supply.

The residents of Hoosick Falls have, on average, tested to have more than 30 times the national level of PFOA in their blood, according to New York State Department of Health data recently obtained by the Politico NY news service.

Meanwhile in the City of Newburgh, NY, 120 miles south of Hoosick Falls, residents have yet to be tested for a similar chemical, Perfluorooctanesulfonic acid (PFOS), although its city manager, Michael Ciaravino had written to the Department of Health requesting blood tests. The drinking supply for the city's residents had been tainted with PFOS.

Both chemicals have been linked to a number of serious health problems, including cancer, thyroid problems and high cholesterol.

“Riverkeeper, the City of Newburgh and many others have called for blood tests of Newburgh residents, and the Hoosick data shows what many have feared about these toxics — too many folks have high exposure levels,” said Dan Shapley, Riverkeeper’s Water Quality Program Manager. “In Newburgh, the high levels of PFOS found in the drinking water reservoir for almost 30,000 people, now requires the state to begin testing these residents, too.”

“The science has spoken in Hoosick Falls,” said John Parker, Riverkeeper’s Director of Legal Programs. “We now need to get results about the extent of the exposure for Newburgh, and move forward with strategies both to remediate the site that is the source of these chemicals, and to protect the city's drinking water supply from future threats.”

N.J. a hot spot for 'Teflon' chemical in drinking water, study says

By Kathleen O'Brien , NJ Advance Media for NJ.com

on August 09, 2016 at 8:48 AM, updated August 09, 2016 at 4:20 PM

NJ.com

/Getty Images)

They're called "Teflon" chemicals, but they could just as easily be called stain-resistant carpet chemicals, or waterproof parka chemicals.

While they may produce items valued by consumers, they also show up in New Jersey's drinking water with greater frequency than any state except California, according to a Harvard University analysis of water samples nationwide.

The chemicals have been linked to cancer, hormone disruption, high cholesterol and obesity, the last two because they confuse the body's nature metabolism.

Polyfluoroalkyl and perfluoroalkyl substances, or PFASs, have been in the news lately because of their discovery in the water supply of the small, upstate New York village of Hoosick Falls.

The chemicals may also be present in the drinking water of as many as six million Americans, according to new data announced by Harvard T.H. Chan School of Public Health.

"For many years, chemicals with unknown toxicities, such as PFASs, were allowed to be used and released to the environment, and now we have to face the consequences," said Xindi Hu, the study's author and doctoral student in environmental health at Harvard.

New Jersey may be a national hot spot for this type of contamination – chiefly because of the manufacturing facilities that have been based here.

The Harvard study took data from earlier water samples showing the chemical in some water samples in 9 New Jersey counties, then projected how much of the watershed might be contaminated by sources of PFAS pollution.

It also looked at the types of facilities likely to send PFASs into surrounding water: military bases that serve to train fire-fighters who use flame retardant spray, civilian airports (for the same reason) and manufacturers known to use the chemical.

High levels were sometimes found near waste-water treatment plants, which were incapable of removing the chemicals by conventional methods.

Researchers found PFASs at levels higher than the Environmental Protection Agency's health advisory levels in about 4 percent of the water samples it tested from 33 states. Three-quarters of those were in just 13 states: California, New Jersey, North Caroline, Alabama, Florida, Pennsylvania, Ohio, New York, Georgia, Minnesota, Arizona, Massachusetts, and Illinois.

In New Jersey, a little more than 10 percent of 675 water samples showed some discernible level of the chemical compounds. The counties where readings registered above the study's threshold were Bergen, Essex, Union, Middlesex, Ocean, Atlantic, Camden and Gloucester.

Bergen had the most samples in which the compound was found, while samples from Atlantic showed the highest readings and Ocean showed the lowest readings.

Water sampled in the Gloucester County town of Woodbury had the highest concentration nationally of one variant of the compound.

So far the chemicals have merely been associated with cancer and metabolic disruption – a higher incidence of these disorders shows in conjunction with the chemicals. It has yet to be proved, however, that the chemicals actually cause the diseases.

The associated illnesses are kidney and testicular cancer, along with problems with cholesterol.

"It turns out the structure of the compounds looks very similar to natural human hormones. So when those compounds are in our body, our bodies get confused, and respond as if they're responding to hormones," Hu said.

She praised the N. J. Department of Environmental Protection for gathering data on what is categorized as an "emerging contaminant." However, there is a push in the legislature to order the DEP to regulate the amount allowed in drinking water.

The study was published Tuesday in Environmental Science & Technology Letters.

Study Finds Widespread Contamination Of Ohio Valley Drinking Water

By Glynis Board, Ohio Valley ReSource

August 9, 2016

WFPL Ohio Pubic Radio

A study of drinking water systems found 6 million Americans, including people in West Virginia, Kentucky, and Ohio, are living with drinking water containing chemicals linked to a host of health problems.

The Harvard Chan School of Public Health published research in the journal Environmental Science and Technology Letters that delves into thousands of drinking water samples from across the nation. Researchers looked for certain chemicals – called “perfluorinated” compounds – which are linked to cancer and other health problems. We’ve been using these chemicals for decades in food wrappers, clothing, carpets, and on nonstick pots and pans.

Researcher Laurel Schaider of the Silent Spring Institute in Newton, Massachusetts, noted where concentrations were highest, and what possible sources of contamination exist.

“We found that water supplies close to industry, airports, and wastewater treatment facilities were more likely to have perfluorinated chemicals,” she said.

Contamination of water supplies was most prevalent in 13 states including Ohio. Chemicals were also detectable in Kentucky as well as in West Virginia.

PFAS

The Harvard T.H. Chan School of Public Health and the Harvard John A. Paulson School of Engineering and Applied Sciences

Schaider said a contamination incident in Ohio and West Virginia a decade ago first pointed to health concerns related to this class of chemicals. In 2005 it came to light that the chemical company DuPont contaminated water sources in the Ohio Valley with a perfluorinated chemical called “PFOA” or “C8”. A lawsuit on behalf of affected residents established a broad medical study, which Schaider says paved the way for further science.

“A lot of what we know about the human health effects of PFOA come from the Ohio River Valley and the C8 study,” she said. “Over 30,000 community members were involved in a health study and the results showed that there were six health effects that were linked to their PFOA exposure.”

Kidney and testicular cancer, pregnancy-induced hypertension, and thyroid disease are some of the maladies that were linked to exposure of PFOA.

A second Harvard study released together with the drinking water survey results builds on that growing body of research into health effects.

That study was led by Philippe Grandjean, who has become one of the foremost experts on health effects of these chemicals. Grandjean’s study looked at long-term effects of perfluorinated chemicals on the immune systems of exposed children. He said it takes years to pass the chemicals out of your system.

“Therefore it’s also plausible [that] while they harm the immune system today, they probably also will down the road, and that’s also what we found,” he said.

Seven years ago the federal Environmental Protection Agency issued a health advisory for anyone with short-term exposure to PFOA. The agency followed up this May with a long-term health. Towns across the country in states including Vermont, Alabama, Michigan, and West Virginia are all adjusting water systems to meet the new suggested threshold. Grandjean said the EPA’s advisory is a step in the right direction, but more action is required.

“The new water limits will essentially maintain status quo or if worse comes to worse, actually increase levels that are typical for Americans,” he explained. “If you drink that a lot of that water that is permissible, many Americans are likely to increase their body burden.”

In the Ohio Valley community of Vienna, West Virginia, residents like Dr. Paul Brooks have been living for decades with C8 levels in their drinking water above EPA’s long-term exposure health advisory. When EPA announced the advisory this summer, construction soon began to add filters to the local water system. Brooks said he still doesn’t trust the water or the EPA’s advisory.

“With the science that keeps coming out – it need to be a lot lower,” he said.

Dr. Brooks is a physician who helped set up the original C8 study in the area, drawing samples and taking health surveys from thousands of Ohio Valley residents.

“With as much saturation as we have here in the environment, engineers have already estimated it’s going to take 200 years of filtration to get it out of the water,” he said.

Brooks said health effects have been documented at levels lower than the EPA’s recommended standard. And for chronic exposure, he worries about how the chemical might build up, or bio-accumulate in the body. He uses an activated carbon filter in his

home to filter out PFOA. Brooks said he thinks every drop of water in the region needs to be filtered.

Study: Public water supply is unsafe for millions of Americans

By Susan Scutti, CNN

Updated 5:43 PM ET, Tue August 9, 2016

CNN

These specific chemicals have been linked to high cholesterol, obesity and cancer

Study says millions of Americans' water has unsafe levels of these chemicals

(CNN) — Millions of Americans may be drinking water with unsafe levels of industrial chemicals, according to a study published Tuesday in the journal Environmental Science & Technology Letters. These chemicals, known as polyfluoroalkyl and perfluoroalkyl substances or PFASs, have been linked to high cholesterol, obesity, hormone suppression -- and even cancer.

Introduced more than 60 years ago, PFASs are a category of man-made chemicals that degrade very slowly, if at all, in the environment.

"I do think that Americans should be concerned about these chemicals," said Susan M. Pinney, a professor in the department of environmental health at University of Cincinnati. Pinney, who did not participate in the new research, explained that not enough time has elapsed to understand all the long-term health effects of these toxins.

Persistent chemicals

"PFASs are organic compounds that are really useful," said Xindi Hu, lead author of the

new study and a doctoral student at Harvard T.H. Chan School of Public Health. This usefulness means these chemicals are used to make such items as food packaging materials (such as pizza boxes and popcorn bags), fabrics, nonstick cooking pans and firefighting foams.

As a result of their ubiquity, the chemicals migrate into air, household dust, food, soil and ground and surface water, and they eventually make their way into drinking water.

The problem with PFASs is that they remain in your body for a long time. Though other chemicals can be excreted within hours, it takes about 3½ years for your body to get rid of just half of whatever amount you ingest, Pinney explained, speaking of one particular PFAS she has studied. If you are exposed day after day, they will accumulate in your body.

"We know this chemical gets stored in the blood serum, the liver and some other organs," Pinney said. While the health effects may not be "huge," subtle changes in cholesterol levels and timing of puberty may have important health consequences if they become prevalent in the population as a whole. And, she says, not all the physical effects are currently known.

But PFASs seem to be everywhere. They are found "in wildlife and human tissue and bodily fluids all over the globe," explained Arlene Blum, a co-author of the new study and executive director of Green Science Policy Institute. A chemist, she spearheaded a 2015 statement signed by 200 international scientists to urge restricted use of PFASs.

Public water supply

For their new study, Hu, Blum and their colleagues examined more than 36,000 water samples collected by the Environmental Protection Agency between 2013 and 2015.

The researchers discovered that 66 public water supplies serving 6 million Americans had at least one water sample that measured at or above the EPA recommended safety

limit of 70 parts per trillion for perfluorooctanesulfonic acid and perfluorooctanoic acid, two types of PFASs. Newark, Delaware, and Warminster, Pennsylvania, showed particularly high concentration levels.

Though the EPA (PDF) declined to comment specifically on this research, the agency noted that the primary manufacturer of perfluorooctanesulfonic acid voluntarily phased out the chemical from production in the U.S. between 2000 and 2002. Four years later, eight major companies agreed to cease their global production of perfluorooctanoic acid and related chemicals, although a few ongoing uses remain.

Still, the study showed that 16.5 million Americans have one of six types of PFASs in their drinking water at levels at or above the maximum EPA limit. Overall, the highest levels were in watersheds near industrial sites, military bases and wastewater treatment plants.

Though 194 public water supplies with higher-than-recommended chemical concentrations are located in 33 states, three-quarters of the toxic water supplies are in just 13 states: California, New Jersey, North Carolina, Alabama, Florida, Pennsylvania, Ohio, New York, Georgia, Minnesota, Arizona, Massachusetts and Illinois.

Related research

A second study from Harvard T.H. Chan School of Public Health, this one appearing in Environmental Health Perspectives, suggested that these chemicals may be disrupting children's immune health.

Researchers led by Dr. Philippe Grandjean, adjunct professor of environmental health, examined a group of about 600 teens from the Faroe Islands. Those exposed to PFASs at a young age had lower-than-expected levels of antibodies against diphtheria and tetanus, for which they had been immunized.

"Others have seen the same effect for measles and influenza," Grandjean said, noting

that such results suggest that PFASs, which are known to interfere with immune function, may be involved in reducing the effectiveness of vaccines in children. "To what extent [PFASs] interfere with other immune functions is unclear, e.g. allergy or autoimmunity, or response to cancer cells," he explained in an email, noting that some PFASs are carcinogenic, though scientists do not understand exactly how they contribute to cancer.

As with any environmental chemical, it takes a long time to understand its human health effects, Pinney said, explaining that the most vulnerable periods for exposure are in utero and during infancy.

The good news is that in the case of perfluorooctanoic acid, one of the the most extensively produced and studied chemicals within the PFAS family of 268 compounds, the concentration levels measured in people's blood are "clearly coming down" within the general population, Pinney said. "This is clearly due to regulations that have reduced industrial use and industrial emission."

Because perfluorooctanoic acid has been studied extensively, she says, its negative effects became known, and the industry stopped using it. But whenever you ban a particular chemical, you often get its "chemical cousin," explained Blum, who wants restrictions placed on all PFAS chemicals. In fact, Blum inspired two other recent research efforts in addition to the two studies presented here to flesh out the story of their ill effects.

"Our position is, given that these chemicals never break down in our environment, they should only be used when needed," Blum said. "What we consider the most harmful chemicals can be reduced by 50%, and that would be a huge benefit to our health."

PFOS/PFOA Water Contaminatio: Warrington residents pack water contamination meeting

By Kyle Bagenstose, staff writer

Aug 8, 2016

Bucks County Courier Times

Photo: Hundreds gather to get answers during a Warrington Township public meeting to address residents' concerns that the township is not taking enough action to remove the contaminants PFOS and PFOA from drinking water wells Monday Aug. 8, 2016.

Last, but certainly not the least amount of people.

Warrington on Monday night became the last of three townships to hold a townhall-style meeting on options for cleaning perfluorinated compounds from its public drinking water. The meeting, at Central Bucks High School South, drew hundreds of township residents who voiced similar concerns as residents at recent meetings in Horsham and Warminster.

“While I appreciate the format of this meeting, I'm sure I speak for many when I express my sincere disappointment that it's taken this long” said Lisa Lucci, of Larkspur Lane. Her comment was followed by applause.

Christian Jones, director of Warrington Water and Sewer Department, pushed back the idea there had been any delay.

He said the water department had been working to ensure the attendance of a range of officials: representatives from the Air National Guard, Environmental Protection Agency, Agency for Toxic Substances and Disease Registry, state Department of Environmental Protection and other officials involved in the water cleanup.

“We have been trying to get this information out to the public,” Jones said. “Getting this meeting together, we tried to do it as quickly — but at the same time — as thoroughly as possible.”

Jones offered a presentation on the status of the township's water and its options to clean it.

Since 2014, according to Jones, five of the township's 10 drinking water wells have been taken offline because of the presence of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) above an EPA's advisory level of 70 parts per trillion (ppt).

The National Guard Bureau has agreed to pay for carbon filtration systems for three of the wells and would also rework its agreement with Warrington to filter two other wells above the 70 ppt threshold, according to Keith Freihofer, environmental restoration program manager for the Air National Guard.

Currently, the water in the township's western division — generally west of Folly Road and Elbow Lane — comes from the North Wales Water Authority and is free of chemicals, Jones said. Residents to the east of the line receive 65 percent of their water from North Wales and 35 percent from the system's remaining wells, which average 19.8 ppt of the chemicals, Jones said.

While the level is below the EPA's 70 ppt level, Jones said Monday the township is considering following Horsham and Warminster water authorities, which have initiated plans to remove chemicals to below detectable levels.

A first option would leave the operating wells and include the purchase 1.4 million gallons a day from North Wales to compensate for the closed wells, even after filtration systems are installed.

A second option would leave all wells offline except for emergency purposes, which would necessitate the purchase of an additional 2.1 million gallons a day from North Wales, meaning the entire township would get water from it.

Warrington officials said they would be discussing the options at a supervisors meeting Tuesday at 7:30 p.m. at the Warrington Township building.

During a question and answer session, several residents made it known what option they wanted.

“Is it even a question?” said Chris Beresovoy, pushing for the second option. “I would think at this point, with such a difference in options, you'd pretty much have a decision made.”

Jones clarified that even if supervisors decided to go with 100 percent North Wales water, it would still take time to install the infrastructure needed to gradually transition fully to the North Wales water supply. Two new interconnections between the systems, monitoring software and booster station upgrades would be needed, Jones said.

Officials said the improvements could be made by the middle of next year.

Many residents also directed questions about the 70 ppt safety level to the EPA representative and questioned the ATSDR's recent decision not to recommend blood tests for as many as 70,000 people affected by the contamination.

Rick Rodgers, of the EPA's regional Office of Drinking Water Protection, said the agency's 70 ppt level was developed based on a thorough review of existing research into potential health effects. Lora Werner, regional director with the ATSDR, reiterated the agency's previous reasoning that blood tests would not tell a resident what health effects they could potentially suffer.

For several residents, the answers weren't good enough.

“What's the problem?” Fricker said, questioning why blood tests weren't recommended. “Why can't we get tested? Tell me what the (chemical level) is and we'll compare it somebody who just uses Teflon to cook in Idaho ... you're afraid. There's no way you want that information out there.”